each location having differing density of gap to pillar ratio, which is proportional to the height of said first material above said top surface;

anistropically etching said first material through each gap of said mask, wherein each gap is etched by the same amount in the height direction; and

polishing said first material to said top surface across the semiconductor die.

3. The method of claim 1 wherein said semiconductor die is one of a plurality of semiconductor dies separated from one another on a semiconductor wafer.

4. The method of claim 3 wherein said mask is formed across the wafer.

5. The method of claim 4 wherein said layer of second material is silicon nitride, and wherein said layer of first material is silicon dioxide.

6. The method of claim 4 further comprising a layer of third material between said layer of second material and said die.

7. The method of claim 6 wherein said layer of second material is silicon nitride, and wherein said layer of first material and third material are silicon dioxide.

8. The method of claim 7 wherein said layer of second material has holes therein connecting said layer of first material and third material.

9. The method of claim 8 wherein each of said dies has trenches therein filled with said layer of first material.

10. The method of claim 9 wherein said density of gap to pillar comprises a plurality of substantially congruent fields with each field having the same size pillar but different size gap.

11. The method of claim 9 wherein said density of gap to pillar comprises a plurality of substantially congruent fields with each field having different size pillar but same size gap.

12. The method of claim 4 wherein said density of gap to pillar comprises a plurality of substantially congruent fields with each field having the same size pillar but different size gap.

13. The method of claim 4 wherein said density of gap to pillar comprises a plurality of substantially congruent fields with each field having different size pillar but same size gap.

14. A method of planarizing a first material on a second material of a semiconductor die, said die having a planar surface, said method comprising:

forming a layer of a third material on said planar surface;

forming a layer of said second material on said layer of third material, said layer of said second material having a top surface substantially parallel to said planar surface;

masking selective portions of said layer of second material, with other portions of said layer of second material unmasked;

etching said layer of second material, said layer of third material, and said semiconductor die to form trenches therein, through said other portions unmasked;

applying said layer of said first material on said die, including in said trenches and on said second material, wherein said layer of said first material varying in a height direction above said top surface;

forming a mask across the die, wherein said mask having a plurality of locations with each location having differing density of gap to pillar ratio which is proportional to the amount of said first material in the height direction from said top surface at said location;

anistropically etching said first material through each gap of said mask, across the die, wherein each gap is etched by the same amount in the height direction; and

planarizing said first material to said top surface across the die.

15. The method of claim 14, wherein said semiconductor die is one of a plurality of semiconductor dies separated from one another on a semiconductor wafer.

16. The method of claim 15 wherein said mask is formed across the wafer.

17. The method of claim 16, wherein said masking step further comprises:

forming a mask covering select portions of said layer of second material with other portions unmasked; and

removing said mask after said etching step.

18. The method of claim 17 wherein said first material and said third material is silicon dioxide, and said second material is silicon nitride.

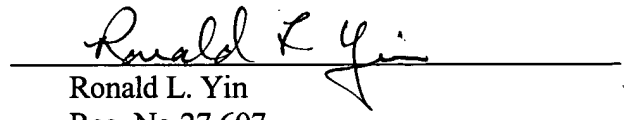
19. The method of claim 17 wherein said density of gap to pillar comprises a plurality of substantially congruent fields with each field having the same size pillar but different size gap.

20. The method of claim 17 wherein said density of gap to pillar comprises a plurality of substantially congruent fields with each field having different size pillar but same size gap.

Claim 1 is retained for filing purpose only. It will be canceled on the next office action.

Respectfully submitted,

Dated: January 21, 2004



Ronald L. Yin
Reg. No.27,607
Attorney for Assignee

GRAY CARY WARE & FREIDENRICH LLP
2000 University Avenue
East Palo Alto, CA 94303-2248
Telephone: (650) 833-2000
Fax Number: (650) 833-2001